

REMARKS

In response to the above Office Action, claim 1 has been amended for clarity, to place the claim in more traditional U.S. format and to include "a unit that detects a passing object as the object traverses the light path and interrupts reception of the reflected light by the light receiving sensor." This is, in essence, the velocity computation unit (16), described on page 13, line 19 to page 14, line 4 of the specification that detects the traversing of an object passing through the light path.

Claims 5-8 were also amended for clarity and new claims 9 and 10 added to more specifically claim the light reflecting means. Support for new claims 9 and 10 can be found on page 12, lines 4-9 of the specification.

In the Office Action, the Examiner rejected claims 1-4 under 35 U.S.C. §102(b) for being anticipated by U.S. Patent 5,394,233 to Wang. In addition, claims 5-8 were rejected under 35 U.S.C. §103(a) for being obvious over Wang in view of U.S. Patent 5,634,855 to King.

As indicated by the Examiner, in Wang either a flat mirror or a corner-cube is provided to reflect light from a target and vibration and displacement of the target is measured by irradiating a laser light to such target and using its reflection.

On the other hand, the device of claim 1 detects a passing object traversing a light path between a light source and a light reflecting means such as a retroreflective sheet. Thus, in the present invention, the light reflecting means is provided apart from the object, instead of the light reflecting means being provided on the target as in Wang.

In any event, claim 1 now includes a unit that detects the passing object as it traverses the light path and interrupts reception of the reflected light by the light receiving sensor.

Such a unit is not disclosed in Wang. Rather, the apparatus disclosed in Wang performs a frequency modulation to the laser to irradiate the object and receive the reflective light to measure the vibration and displacement by calculating a phase difference between the modulated laser and the reflective light.

Accordingly, it is submitted that claims 1-4 cannot be considered to be anticipated by Wang, and its withdrawal as a ground of rejection of these claims under §102(b) is requested.

With respect to the rejection of claims 5-8, claim 5 relates to an apparatus comprising two devices for detecting a passing object, each device having a light source and a light receiving sensor disposed on a side opposite to a light reflecting means with respect to the path of the passing object.

As noted above, in Wang there is no passing object which is a detection target traversing a light path. Thus, in Wang, a light source and a light receiving sensor are not disposed on a side opposite to a light reflecting means with respect to the passing path of a passing object as set forth in claim 8.

In King, reference numerals 7, 8, 9, and 10 correspond to the light sources and the light receiving sensors as described in column 3, lines 13-26 and column 4, lines 42-60 of King. When a golf club head traverses a path between the light sources and the light reflecting means, the traversing of the golf club head is detected. However, King does not describe disposing the light source and the light receiving sensor on a side opposite to a light reflecting means with respect to the passing path of the golf club head or aligning a light path of light reflected by a light reflecting means and a light path of light incident on the light reflecting means with each other all as set

forth in claim 8. In King the light sources and the light receiving sensors are on opposite sides of the path and there is no light reflecting means.

Thus even if King was combined with Wang, the combination would still not meet the apparatus of claim 5 because neither teaches disposing a light source and light receiving sensor on a side opposite to a light reflecting means with respect to the passing path of the passing object.. As required by M.P.E.P. §2143, to establish a prima facie case of obviousness, all of the claimed limitations must be taught or suggested by the combination of references.

Accordingly, it is submitted that claims 5-8 are not obvious over Wang in view of King, and the withdrawal of the references as a ground of rejection of claims 5-8 under §103(a) is requested.

New claim 10 describes that the light reflecting means is a retroreflective sheet. In column 4, lines 67-68, Wang describes that a corner cube is insensitive to rotation and lateral movement. On the other hand, a retroreflective sheet is insensitive to both rotation and lateral movement. Thus it is submitted that claim 10, dependent on claim 6, is also not obvious over Wang in view of King for this additional reason.

It is believed claims 1-10 are in condition for allowance.

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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